

Conclusion: There were a variety of highly individualised specimens seen. It was not possible to conclude the definite reasons for failure but this study has certainly highlighted crucial points for future studies to address.

1125: FUNCTIONAL OUTCOMES FOLLOWING THE USE OF AN INEXPENSIVE MINI-EXTERNAL FIXATOR DEVICE FOR PHALANGEAL FRACTURES

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Introduction: Complex phalangeal fractures are often stabilised using commercial external fixators, which are costly and require familiarity. Here we describe our positive experience using a simple fixator constructed using readily available materials.

Methods: Patients who had phalangeal external fixation by a single operator, over a five year period were identified from theatre logbooks. Data was obtained retrospectively on aetiology, fracture configuration, operative details, complications and post-operative function using Total Active Movement (TAM) scores.

Results: Outcome measurements were retrieved in 26 of 38 patients identified. Injuries were sustained through altercation (n=6), crush (n=7) or fall onto hand (n=17). The majority affected the little finger (n=15) and the proximal phalanx (n=19) was most commonly fractured. One fracture was open. All achieved bone union. No secondary procedures were required. Complications occurred in 9: unexpected stiffness (n = 1), unexpected swelling (n = 4) and pin-site infection (n=4). At four months the functional outcome was good (%TAM>80%) or excellent (%TAM = 85%) in all patients with a mean TAM of 230o.

Conclusion: This external fixator provides a reliable and cost-effective method of complex fracture fixation. The post-operative complications are acceptable and functional outcomes highly favourable when compared to other methods of phalangeal fracture fixation.

1138: TARGETED FOOT AND ANKLE INJECTION WITH ULTRASOUND GUIDANCE IN THE RADIOLOGY DEPARTMENT REDUCES THE NUMBER OF PATIENTS REQUIRING INJECTION IN THEATRE

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Introduction: Foot and ankle pain is common, with causes including osteoarthritis, tendonitis and fasciitis. Targeted injection with local anaesthetic and corticosteroid can be used for diagnostic and therapeutic purposes. This can be performed in theatre, or clinic with ultrasound guidance.

Methods: Foot and ankle injections performed in theatre by a single Orthopaedic consultant from January-2007 to December-2010 were reviewed by log-book entries. Those referred for ultrasound-guided injection during this period were also recorded. These were performed by a Musculoskeletal consultant radiologist. Costs for these were calculated using clinical coding data.

Results: Injections performed in theatre has reduced markedly, from 134-[2007], 118-[2008], 43-[2009] and 28-[2010]. Concurrently, injections performed in the radiology department had risen from 10-[2008], 41-[2009], and 100-[2010] (p<0.001)

Cases performed in theatre cost the trust £1229, though receiving just £630 from the PCT for each; a loss of £599. Cases performed in radiology cost £206, saving £393 per patient, with projected savings of £58,164 in 2011.

Discussion: Increasing numbers of injections in the radiology department, and a subsequent reduction in theatre cases has been demonstrated. Close co-operation between Orthopaedic Foot and Ankle surgeons and Musculoskeletal radiologists produces massive savings in theatre costs, time, and a more efficient patient pathway.

1202: USING TOURNIQUET AND SURGICAL DRAIN IN TOTAL KNEE ARTHROPLASTY: DOES IT MAKE A DIFFERENCE?

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Aim of Study: To look for any difference in perioperative recovery and complications following use of pneumatic tourniquet and surgical drains in knee replacement surgery.

Methodology: We retrospectively analysed 60 total knee arthroplasties performed by 3 different surgeons at our hospital during January 2007 to June 2010. Patients were grouped for using tourniquet and/ drain

Results: Surgical time: Use of tourniquets didn't improve it (123 - 133 minutes), Local Hospital pain score (1-5) at discharge: No significant difference. Blood transfusion (50%) was more if no tourniquet used. Only one proven case of superficial infection at 6 weeks which responded well to antibiotics. No deep infection was noted. The mean hospital stay in hospital was least (5.5 days) if tourniquet but no drain used. Post-operative deep vein thrombosis: No significant difference (5% in Group 1 and 3).

Conclusion: Pain score at discharge was comparable in all groups Patients with tourniquet but no surgical drain had least hospital stay (mean 5.5 days) and least blood transfusion rate (5%). Decision to use pneumatic tourniquet & drain still lies with the operating surgeon. We recommend a randomised control study for further evidence.

PAEDIATRIC SURGERY

0010: RISK FACTORS ASSOCIATED WITH ADVANCED APPENDICITIS AND COMPLICATIONS AFTER CHILDHOOD APPENDECTOMY

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Aim: To determine the risk factors associated with advanced appendicitis and complications after childhood appendectomy.

Methods: A retrospective observational study was done in 435 children (< 15 y) who had surgery for a preoperative diagnosis of appendicitis during a 14-year period. Data included pre-operative symptoms and signs, time from onset of symptoms to surgery, presence of advanced appendicitis (gangrene, perforation, appendiceal abscess or mass, peritonitis), and postoperative complications within 1 year after surgery. Risk factors were analysed using logistic regression.

Results: The mean time from onset of symptoms to beginning of surgery was 33 ± 22 hours. Wound infection occurred in 9/435 (2%) patients. Overall postoperative complication rate was 6%. Advanced appendicitis was significantly associated with treatment delays; age of the patient; preoperative rebound tenderness, fever, tachycardia, tachypnea, leukocytosis, and Alvarado score ≥ 5. Postoperative complications in all patients were significantly associated with preoperative fever, tachypnea, and advanced appendicitis.

Conclusions: Appendicitis if untreated may progress to advanced appendicitis. Early diagnosis and urgent appendectomy are important in acute appendicitis, especially in patients with preoperative fever and tachypnea. Although other studies with similar conclusions have been done in urban settings, this study provides data supporting the care of acute appendicitis in a rural hospital setting.

0278: AUDIT OF PAEDIATRIC APPENDICECTOMIES AT A LARGE DISTRICT GENERAL HOSPITAL: 2006 - 2010

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Aims: To discover the number of negative paediatric appendicectomies at a large DGH between 2006-2010, compare intra-operative versus histological findings, analyse 'time to theatre', antibiotic prescribing, Alvarado scores, and postoperative stay.

Method: Clinical, operative, and histological records of 107 children who underwent appendicectomy were analysed. A dataset was created and analysed using ExcelTM and SPSSTM. Correlation and linear regression analyses were carried out. Alvarado Scores were calculated.

Results: 71 males(66%); 36 females(34%). Age range 3-16 years, (mean=11). All patients had clinical diagnoses of acute appendicitis. At operation 78%(n=83) were classified as acute appendicitis, whilst histological analysis confirmed only 61%(n=65), ie negative appendectomy rate of 39%. Conversely, 4% of appendices deemed 'noninflamed' at operation were later classified inflamed at histology. More males had positive histology (♂65% vs. ♀31%); the opposite was true for negative histology (♀56% vs. ♂44%). 18% of cases received no antibiotics. Alvarado Score correlated strongly with positive histological diagnoses, but not with complication or readmission rate.

Conclusion: A large proportion of children underwent surgery which revealed, histologically, a non-inflamed appendix. Discrepancies remain between intra-operative and histological findings, with implications for those arguing for increased use of 'laparoscopy & proceed' techniques. Poor adherence to hospital antibiotic protocol was noted.

0389: WHEN DOES ULTRASOUND INFLUENCE MANAGEMENT IN SUSPECTED CASES OF PAEDIATRIC APPENDICITIS? A RETROSPECTIVE DUAL CENTRED STUDY BETWEEN CHRISTCHURCH PUBLIC HOSPITAL IN NEW ZEALAND AND ROYAL ABERDEEN CHILDREN'S HOSPITAL IN SCOTLAND

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Ultrasound (US) is a safe imaging modality used for assessing patients with abdominal pain but its use in the management of acute appendicitis is contentious.

Aim: To review the role of US in the management of suspected appendicitis in two similarly matched hospitals.

Methods: Data from acute admissions, radiology and theatre were cross-referenced to review all children <16 years of age that underwent an appendicectomy ± an US for query appendicitis in 2009.

Results: The number of US scans performed were similar between the two centres (108/442 NZ and 30/157 Aberdeen). Girls were more likely to be scanned than boys ($\chi^2=0.038$). The visualisation rate (VR) of the appendix at US was 32% in NZ and 17% in Aberdeen with identical Positive Predictive Value (67%), Negative Predictive Value (100%) and positive appendicectomy rate (73%) in both institutions. Combined, 28% (13/46) had an appendicectomy when the appendix was not seen at US and no other pathology was detected, of which 54% were confirmed cases of appendicitis.

Conclusion: We should be encouraging radiologists to look for the appendix. VR is much poorer than literature suggests. If US-negative, have a high threshold for appendicectomy. If US-positive this aids laboratory results and clinical suspicion. What is the role of a diagnostic laparoscopy?

0613: CRYING OUT FOR A DRINK: COMPLIANCE WITH NATIONAL PRE-OPERATIVE FASTING GUIDELINES IN CHILDREN

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Aim: Appropriate pre-operative fasting in children is crucial to minimise risk of aspiration. However, over zealous fasting may adversely affect recovery as well as increasing parent and child anxiety. Children admitted for elective surgery are often initially clerked on general paediatric wards by paediatric juniors. This may result in incorrect pre-operative fasting. We set out to audit practice against national guidelines.

Method: A questionnaire survey was undertaken of surgeons, paediatricians and nursing staff involved in the care of children (birth to 16yrs) from 5 surgical sub-specialties (general, neurosurgery, OMFS, orthopaedic and transplant) on both general paediatric and sub-specialty specific wards. Statistical analysis for variation with $p < 0.05$ accepted as significant.

Results: 43 individuals were surveyed (19 doctors [8 surgical, 11 paediatric], 24 nurses). 35% had full awareness of fasting guidelines and there was no statistically significant difference between staff groups. Knowledge of specific fasting times for formula and breast milk was poor compared with those for solids and clear fluids ($p=0.002$).

Conclusions: Current awareness of paediatric pre-operative fasting guidelines is poor particularly those regarding formula and breast milk and thus pertaining to younger infants. This is concerning as this group is particularly susceptible to pre-operative distress when fasted incorrectly.

1113: HERNIOTOMY IN CHILDREN – LONG TERM FOLLOW UP

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Aims: Inguinal hernia repair is the most commonly performed surgical procedure in children. Recent data suggests this operation in children carries a very low complication and recurrence rates. This study was carried out to evaluate the long term recurrence rates.

Methods: Retrospective study of patient notes from 2000 - 2009 (below 16yrs). Data collected via telephone interview/questionnaire from patient & parents as appropriate. Follow up time calculated by subtracting age at operation from current age

Results: 71 of 85 patients were able to provide required data (14 months - 14 years). 33 out of 71 (46.4%) were below 5 yrs, further 27/71 (38%) were above 5 years of age. Median follow up was 7 years with a minimum follow up of at least 1 year. 3 patients (4.2%) developed recurrence at 1, 3 & 4 years from their initial operation. 1 child (1.2%) developed hematoma and wound infection post-operatively.

Conclusions: Hernia surgery in children is associated with very low complications and long term follow up study suggests most recurrences occur within 5 years of original operation. Our study suggests recurrence is more common in above 2 year old repairs. Although this is a small study it opens a debate whether this group needs long term follow up or not.

PLASTIC SURGERY

0037: BREAKING DOWN THE HEALTH CARE LANGUAGE BARRIER: EXPERIENCE OF A REGIONAL BURN UNIT

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Aims: The objectives of this study were to (1) assess the requirement and provision of translation service at a regional burn unit (2) to implement changes based on national guidelines to improve clinical effectiveness.

Method: A prospective study was performed to assess translation requirements of 100 patients attending the burns outpatients department. A questionnaire was designed to collect data on burn distribution, mechanism, complications, native language of patient and person accompanying patient, translation needs and adequacy. Changes were implemented according to the NICE guidelines, including updating translation materials, training interpreters, educating referring hospitals, contacting twenty cultural centres in the region to provide 'burns first aid and safety in the home' courses in the native community language. Follow-up study collected data on 85 additional patients following implementation of changes.

Results: The number of patients whose native language is not English in the two cohorts was similar (32%vs30.5%). Translation needs decreased significantly (32%vs8%; $p<0.0001$) following education to the referring hospitals. Adequacy of translation improved (91.6%vs100%), and the use of ad hoc interpreters, including family members/relatives and staff, reduced.

Conclusions: Targeted education can improve language service, which is an essential element of patient care in a multi-cultural society such as Britain.

0063: THE TERTIARY MANAGEMENT OF PRETIBIAL LACERATIONS

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Aims: Pretibial lacerations remain one of the commonest yet most neglected conditions facing plastic surgery. Furthermore, these injuries afflict the most vulnerable groups of adults - the elderly and the infirm. This review aims to provide an evidence-based treatment plan, reduce unnecessary surgery and safeguard the at-risk patient.

Methods: A MEDLINE search was conducted using the terms (Lacerations OR Laceration) and keywords (pretibial, pre ADJ tibial) to identify high level evidence.

Results: We present an evidence-based approach of these injuries and propose a treatment algorithm that we have utilized to successfully manage 40% of pretibial lacerations conservatively.

Conclusion: The evidence-based algorithm suggested for the management of these wounds is- I **Linear laceration without skin loss:** Manage conservatively; Level of Evidence IV. II **Flap laceration viable:** Steristrip and manage conservatively; level of Evidence I. III **Flap laceration non-viable:** Small non-viable flaps: Excise and manage conservatively; larger skin flaps: Excise and skin graft under local anaesthetic; level of Evidence II. IV **Skin loss:** < 1% TBSA: Manage conservatively; >1% TBSA: Skin graft under local anaesthetic; level of Evidence V. V **Laceration with haematoma:** Evacuate haematoma and skin graft; Level of Evidence V